

Figure 1 (Prior Art)

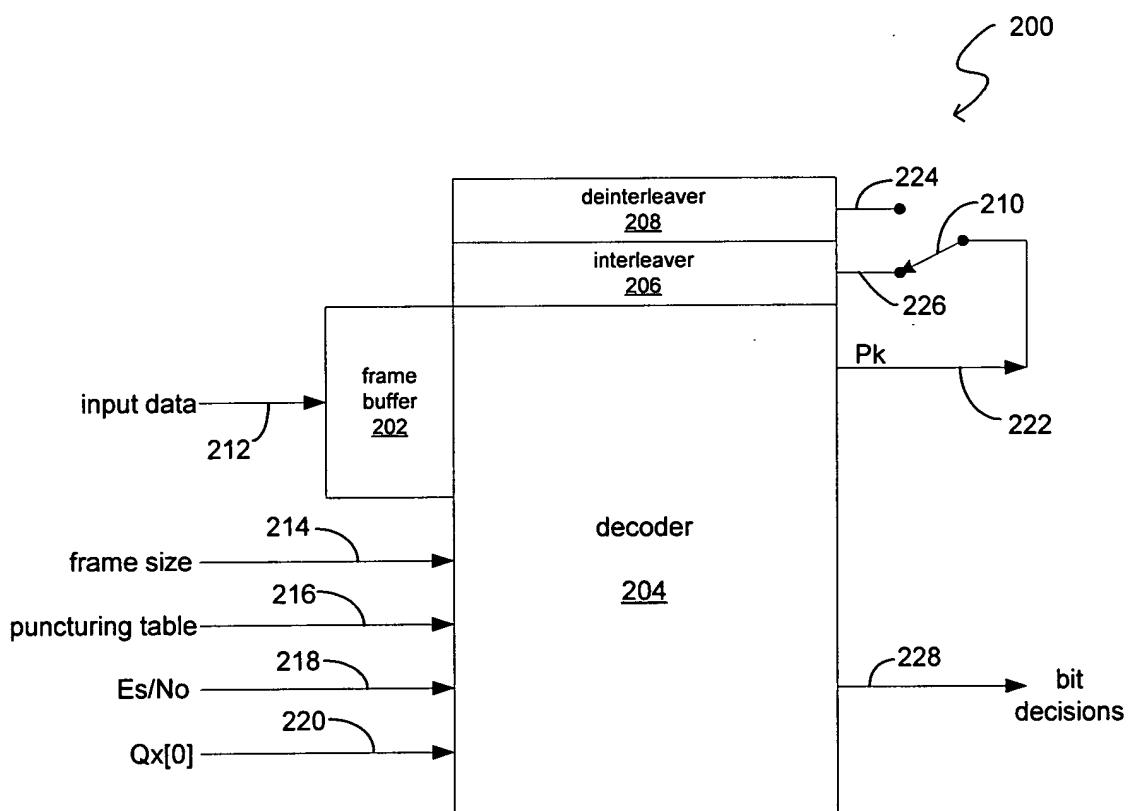


Figure 2

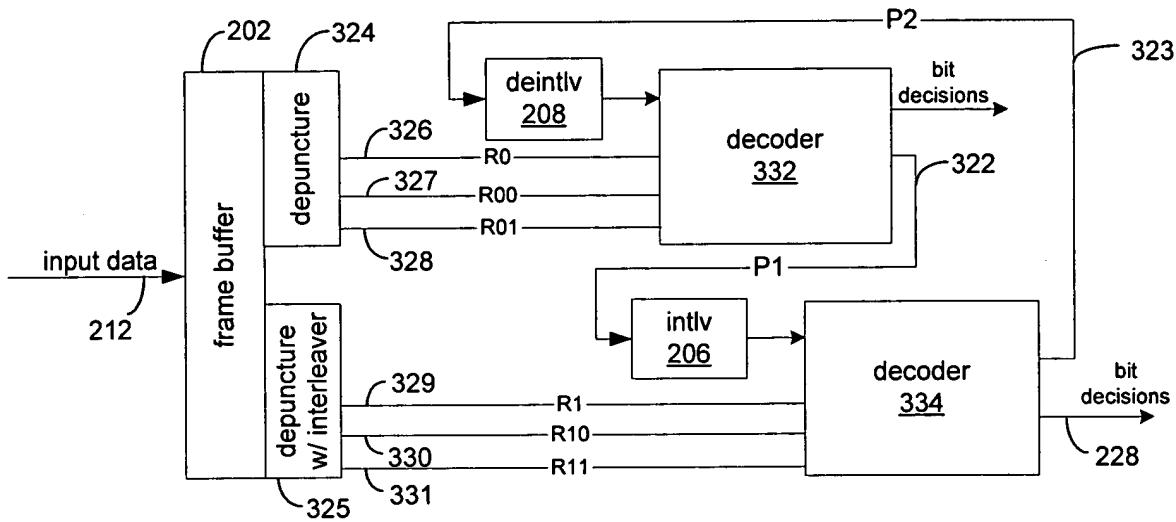


Figure 3

The diagram shows a table (400) used for decoding. The table has two columns. The first column contains entries for $\tilde{z}_0, \tilde{z}_1, \tilde{z}_2, \dots, \tilde{z}_{N-1}$. The second column contains corresponding values $\tilde{a}_0, \tilde{a}_1, \tilde{a}_2, \dots, \tilde{a}_{N-1}$. The table is labeled with 402 at the top left and 404 at the top right. A pointer 406 points to the first row, and a pointer 407 points to the last row.

$\tilde{z} = z\sigma^2$	$\log_{s-table}(\tilde{z}) = \log(1 + e^{-z})\sigma^2$
\tilde{z}_0	\tilde{a}_0
\tilde{z}_1	\tilde{a}_1
\tilde{z}_2	\tilde{a}_2
\vdots	\vdots
\tilde{z}_{N-1}	\tilde{a}_{N-1}

Figure 4

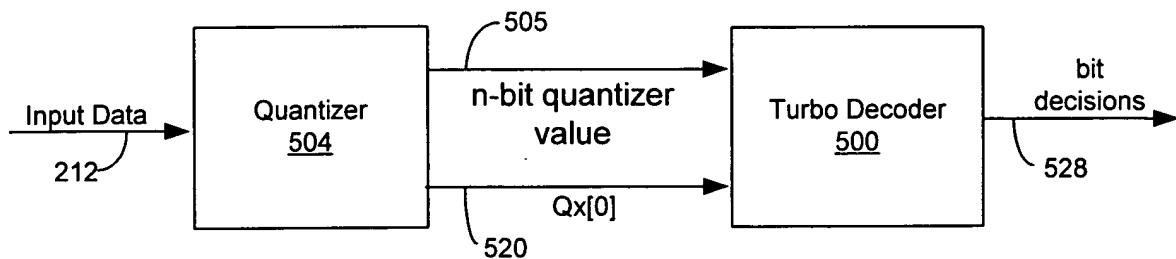


Figure 5

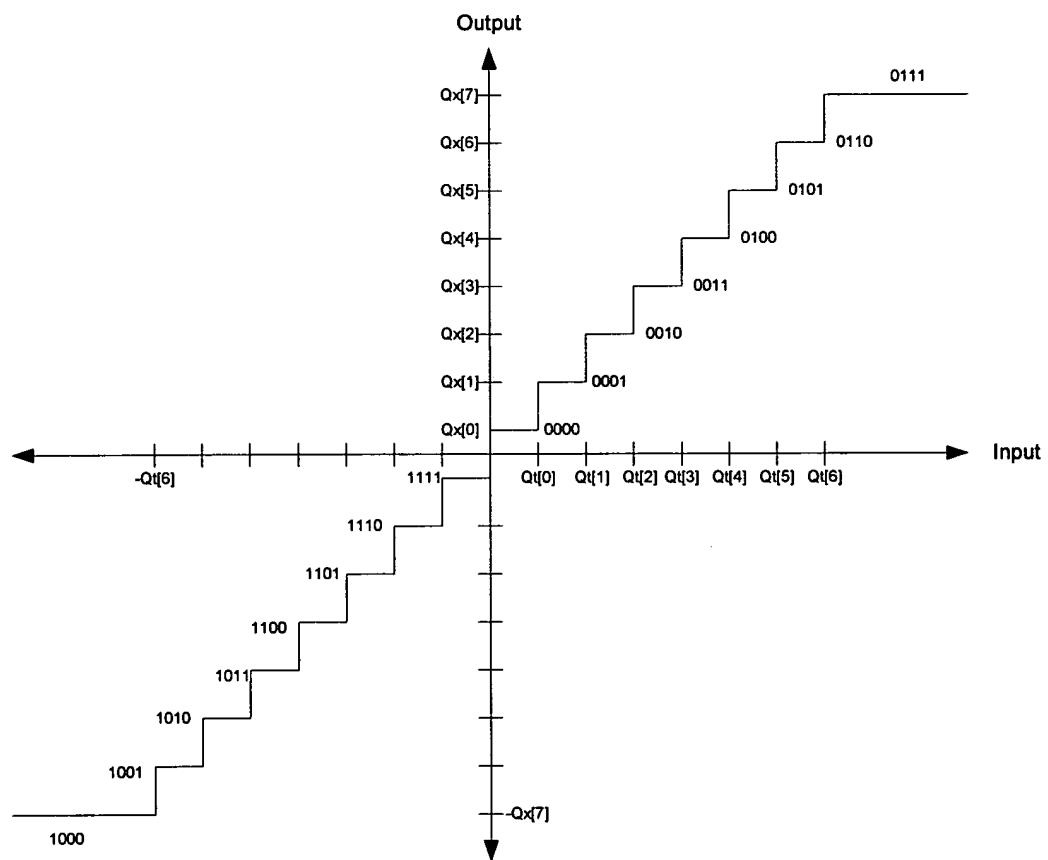


Figure 6

$z' = z\rho\sigma^2 / Qx[0]$	$\log_{s-table}(z') = \log(1 + e^{-z})\rho\sigma^2/Qx[0]$
z'_0	a'_0
z'_1	a'_1
z'_2	a'_2
\vdots	\vdots
z'_{N-1}	a'_{N-1}

Figure 7

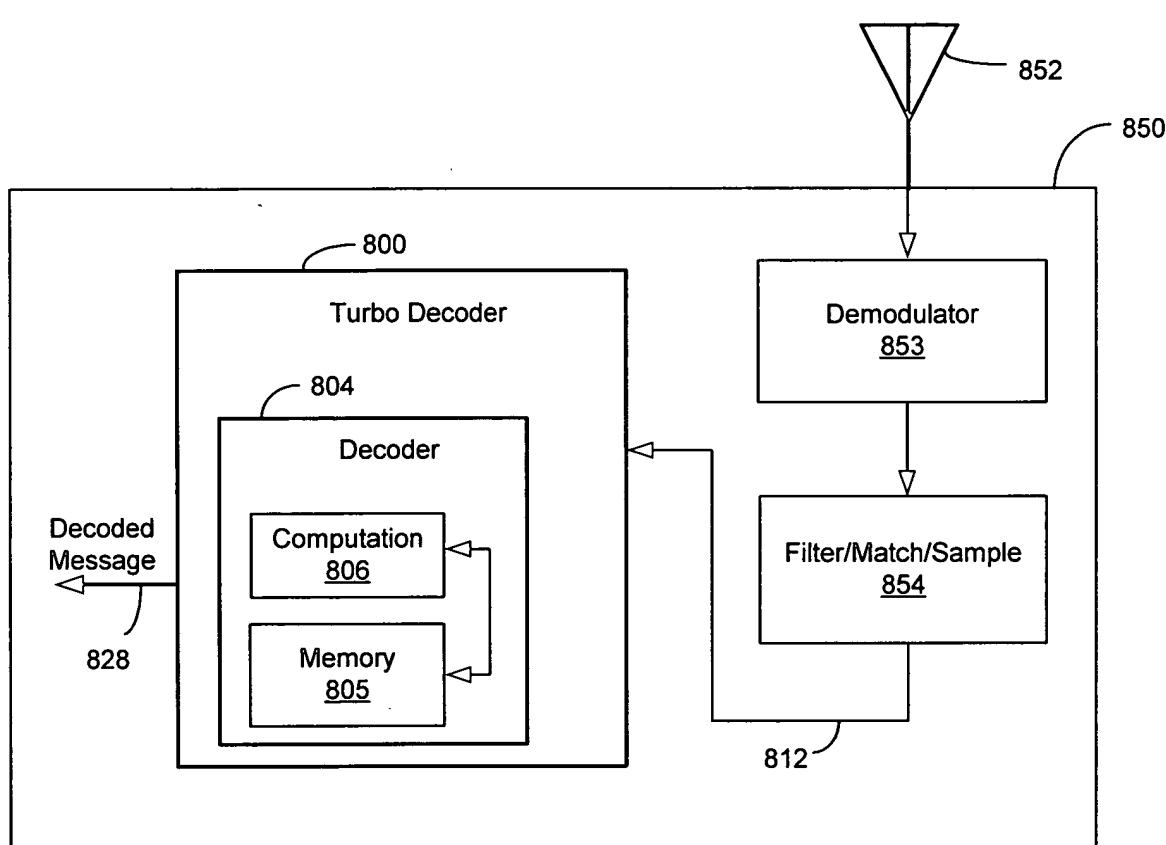


Figure 8

\bar{z}	z_{Addr}	$\log_{table}(\bar{z}) = \log(1 + e^{-\bar{z}})$
$\bar{z}_0 = 0$	0	\bar{a}_0
$\bar{z}_1 = 1 \times 2^{\lfloor \log_2(z_1) \rfloor}$	1	\bar{a}_1
$\bar{z}_2 = 2 \times 2^{\lfloor \log_2(z_2) \rfloor}$	2	\bar{a}_2
\vdots	\vdots	\vdots
$\bar{z}_{2N-1} = (2N-1) \times 2^{\lfloor \log_2(z_{2N-1}) \rfloor}$	$2N-1$	\bar{a}_{2N-1}

Figure 9

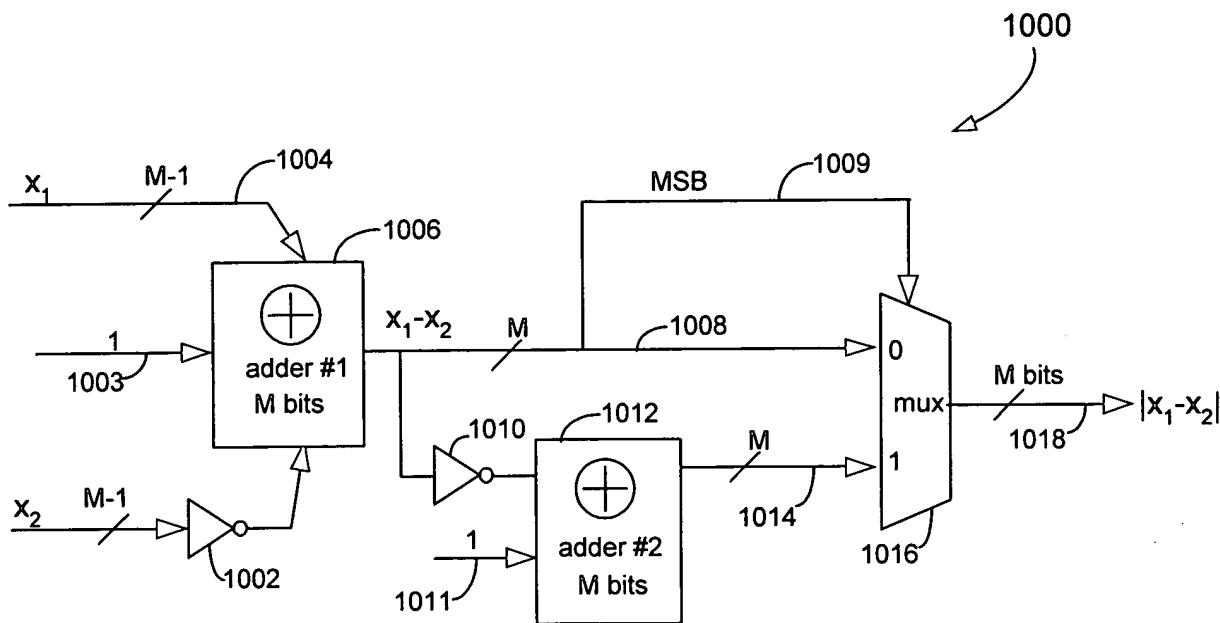


Figure 10

TURBO DECODER - 5.0000000000000005

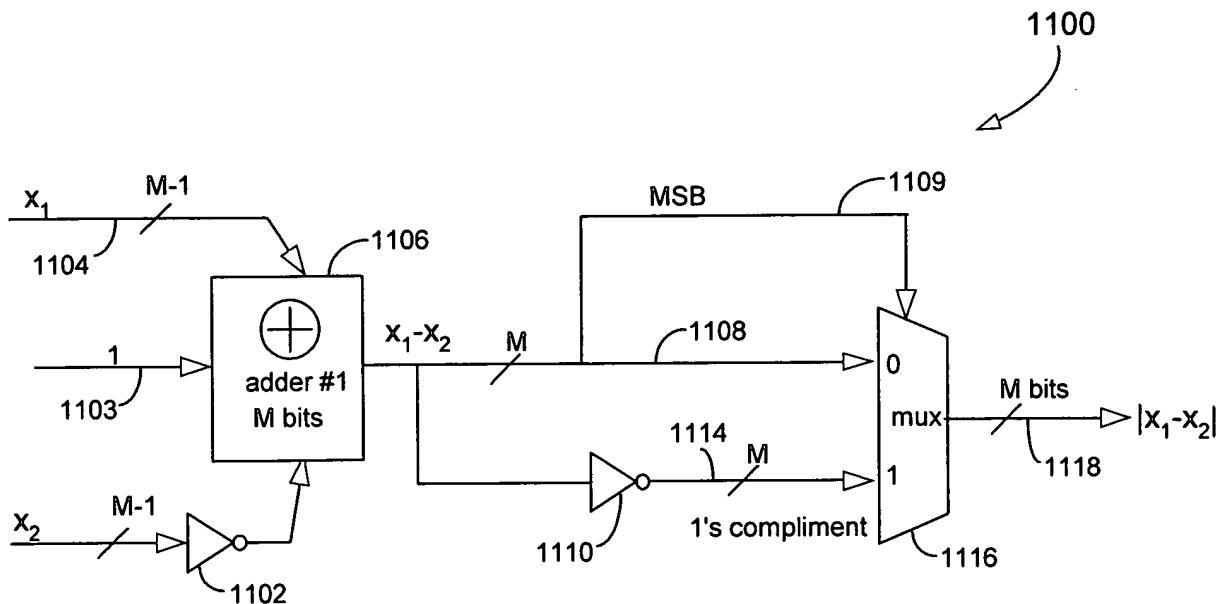


Figure 11

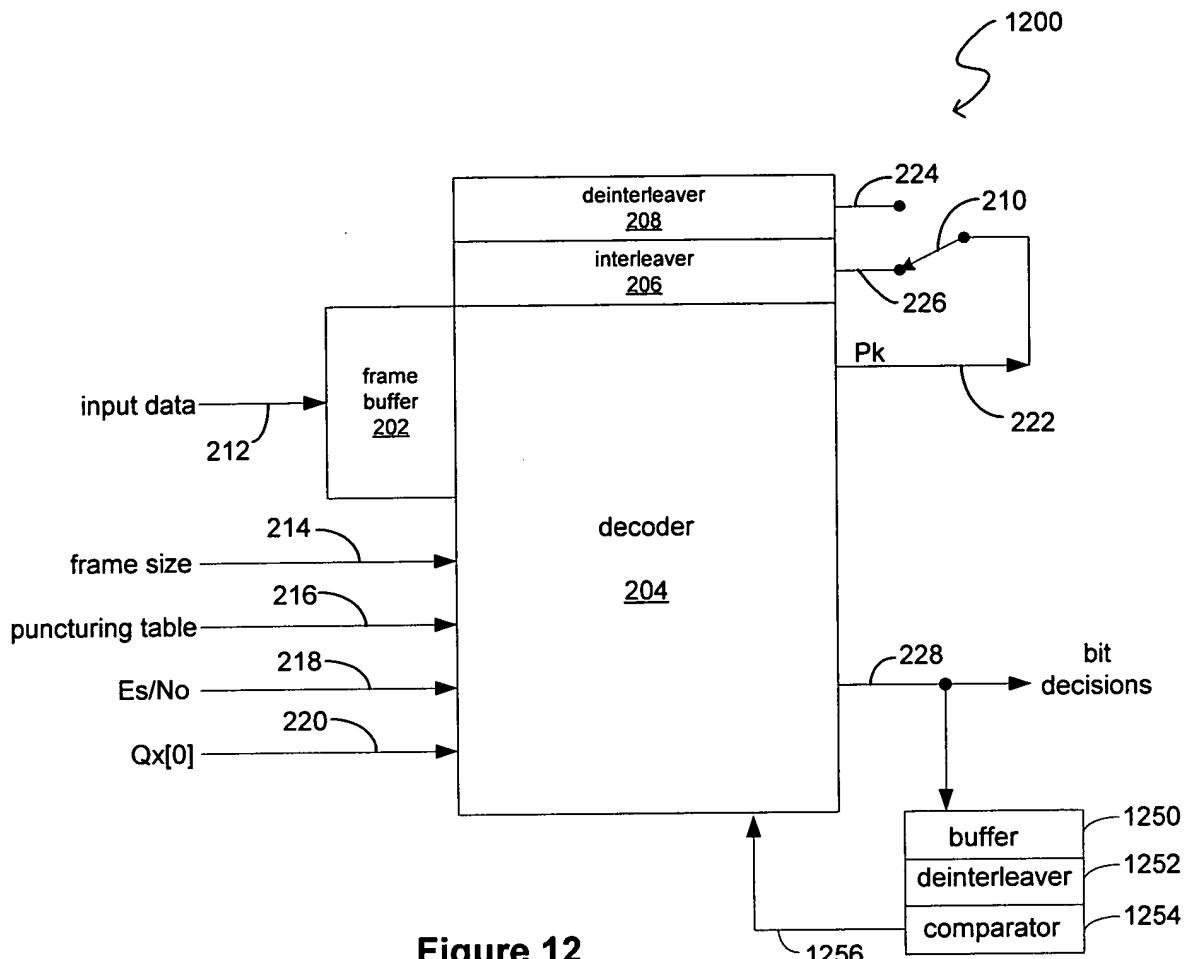


Figure 12

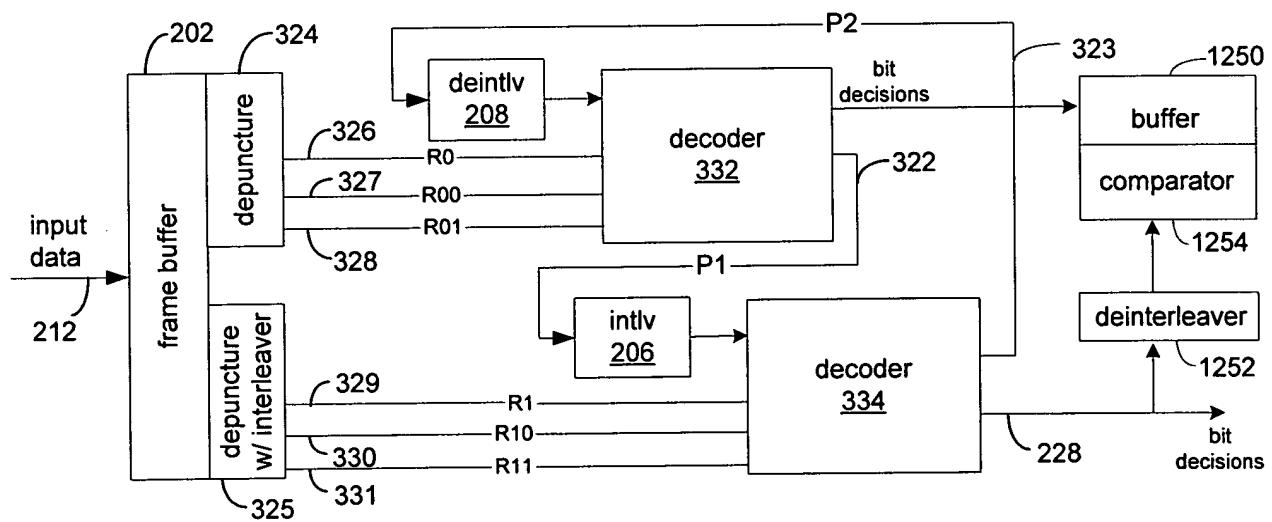


Figure 13